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ENHANCED MICROPHONE SECURITY WITH COLOR SENSOR

HP INC

Enhanced Microphone Security with Color Sensor

Abstract:

A recent study has proven voice commands can be transmitted using a laser targeted a voice assistant device's microphone.

This disclosure provides a solution to detect any laser presence targeted at notebook's microphone and the ability to disable the microphone to prevent unwanted voice commands

Disclosure:

This disclosure is to introduce designing a notebook with color sensor in close placement of the microphones to detect any spike levels before authenticating the voice commands. This will provide enhanced security against laser-based voice commands to initiate unintended commands with voice assistants and unintended wake up system with Wake-on-voice enabled.

Lasers can come in two forms: invisible and visible. Invisible lasers typically have a wavelength of ~980 nm and the majority of visible lasers emit wavelengths of ~638nm (red) and ~450nm (blue). A color sensor with IR detection can detect if there is a spike level in these particular wavelengths to identify if a voice command is coming from an intruder.

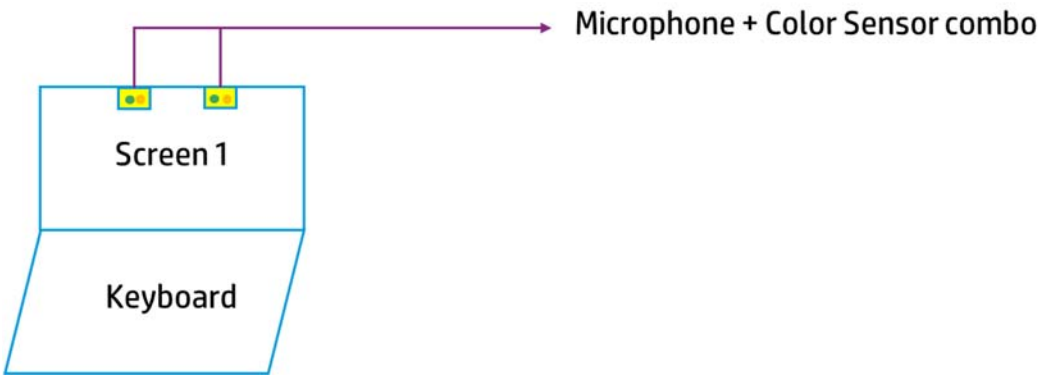
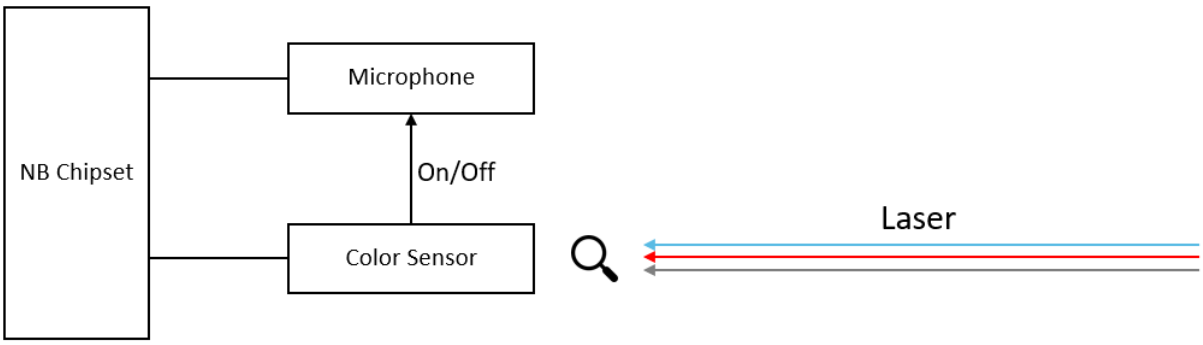


Diagram:



Disclosed by Nick Thamma and Simon Wong, HP Inc.